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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/695,314 | 10/28/2003 | Timothy J. Morscheck | 02-TRN-178 | 4190 |

7590 05/23/2005

Kevin M. Hinman
26201 Northwestern Hwy.
P.O. Box 766
Southfield, MI 48037

EXAMINER

LE, DAVID D

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

3681

DATE MAILED: 05/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | | |
|------------------------------|------------------------|--|----------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 10/695,314 | | MORSHECK, TIMOTHY J. | |
| | Examiner | | Art Unit | |
| | David D. Le | | 3681 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is the second Office action on the merits of Application No. 10/695314, filed on 28 October 2003. Claims 1-9 are pending.

Documents

2. The following documents have been received and filed as part of the patent application:
 - Information Disclosure Statement, received on 10/28/03
 - Information Disclosure Statement, received on 03/03/04
 - Information Disclosure Statement, received on 11/04/04

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 5,643,121 to Greenwood et al. in view of WO 02/057107 A1.**

Claims 1-5:

Greenwood (i.e., Figs. 1-3; column 2, line 23 – column 4, line 26) discloses a continuously variable ratio transmission comprising:

- A gear unit (i.e., Fig. 1, being the combination of gear trains 35-37) having gears providing a plurality of selectively engaged gear ratios and the gear unit having a gear

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unit input shaft (i.e., Fig. 1, being any one of shafts 13-15) and a gear unit output shaft (i.e., Fig. 1, being shaft 38);

- A variator (20) having a variator input shaft (19) and a variator output shaft (22) and configured to continuously vary a ratio of input torque to output torque between the variator shafts, the variator output shaft drivingly connected to the gear unit input shaft;
- An input gear set (3) drivingly connected to the variator input shaft;
- An input fixed ratio element (18) configured to reduce the torque from the input gear set to the variator and operably disposed between the input gear set and the variator input shaft;
- An output fixed ratio element (24) configured to increase the torque from the variator and operably disposed between the variator output shaft and the gear unit input shaft;
- Wherein the input gear set is a planetary mixer gear set including a ring gear, a sun gear, and a carrier retaining a plurality of planet gears disposed between the ring gear and the sun gear with at least one of the ring gear the sun gear and the carrier drivingly connected to the variator input shaft (see Fig. 1);
- Wherein the ring gear of the planetary mixer gear set is fixed to a mixer input shaft (2), the sun gear of the planetary mixer gear set is drivingly connected to the variator output shaft, and the carrier of the planetary mixer gear set is fixed to a mixer output shaft (13), which is drivingly connected to the gear unit input shaft (see Fig. 1); and
- Wherein the gear ratios of the gear unit are gathered gear ratios (see Fig. 1).

Greenwood does not explicitly disclose an electronic control unit configured to include logic rules for controlling a transmission, including issuing transmission control commands.

WO 02/057107 A1 (i.e., Fig. 6; page 6, line 5 – page 12, line 14), on the other hand, teaches an electronic control unit (T-ECU 22) configured to include logic rules for controlling a transmission, including issuing transmission control commands.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify *Greenwood* to include an electronic control unit such as the control unit T-ECU 22, in view of *WO 02/057107 A1*, in order to improve the fuel consumption and drivability of the continuously variable transmission.

Allowable Subject Matter

5. Claims 6-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments filed 29 March 2005 have been fully considered but they are not persuasive.

Applicant argues that Greenwood' 121 reference discloses the fixed ratio element 24 having a 1.0 ratio and, therefore neither increases nor decreases the torque from the variator.

Examiner respectfully disagrees for the reason that the claimed limitation only requires "an output fixed ratio element configured to increase the torque from the variator".

Greenwood' 121 discloses an output fixed ratio element (24) configured with the variator (20) and other associated elements such as element 19 and element 18 to increase the torque from the variator.

Accordingly, Greenwood' 121 reference meets the claimed limitation.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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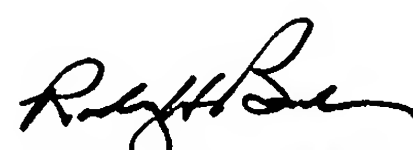
however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ddl


RODNEY H. BONCK
PRIMARY EXAMINER
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